

What Is Claimed Is:

1. A method for licensing a technology platform developed by a content technology provider to a content provider for deploying an applet to a content user, wherein financial compensation to the content technology provider is based on usage of the applet by the content user, the method comprising:
 - embedding licensing information into the applet;
 - generating usage data when the applet is executed by the content user;
 - transmitting the usage data to a server;
 - determining a licensing fee according to the usage data; and
 - billing the content provider for the licensing fee.
2. The method of claim 1, wherein the content user comprises a content user on an Intranet.
3. The method of claim 1, wherein the content user comprises a content user on the Internet.
4. The method of claim 1, wherein the technology platform comprises a content language for representing the applet in the content language and an execution engine for displaying and processing the applet.
5. The method of claim 4, wherein the technology platform further comprises a development environment for creating the applet.

6. The method of claim 1, wherein embedding licensing information into the applet comprises embedding a licensing tag into the applet, the licensing tag comprising a license number associated with the content provider and a license category.

7. The method of claim 6, wherein the license category comprises a non-commercial license to deploy non-commercial applets.

8. The method of claim 6, wherein the license category comprises a commercial retail license to deploy commercial applets based on the technology platform, the commercial retail license incurring a licensing fee determined by a standard fee schedule based on metered applet usage.

9. The method of claim 6, wherein the license category comprises a commercial negotiated license to deploy commercial applets based on the technology platform, wherein the terms of the license are negotiated between the content provider and the content technology provider.

10. The method of claim 1, wherein the usage data comprises one or more data items selected from a group consisting of: the size of the applet; the time and day of execution of the applet; the version of the execution engine used to process the applet; the amount of time during which the applet was executed; and the degree of interactivity of the applet.

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11. The method of claim 10, wherein the usage data is stored into a metering record.

12. The method of claim 11, wherein the metering record comprises one or more data fields selected from a group consisting of: a license number data field associated with the content provider; a size data field containing the size of the applet; a data field containing the time and day of execution of the applet; a license category data field indicating whether the applet contains commercial content; a record checksum data field to verify the contents of the metering record; a version data field indicating the version of the execution engine used to process the applet; and an applet statistics data field.

13. The method of claim 12, further comprising storing the metering record into a metering database.

14. The method of claim 1, further comprising validating the licensing information to verify whether the license number is a valid license number assigned by the content technology provider.

15. The method of claim 1, wherein transmitting the usage data to a server comprises storing a plurality of metering records into a metering file and transmitting the metering file to the server.

16. The method of claim 15, wherein transmitting the metering file to the server comprises:

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determining the time of creation of one or more metering records in the metering file;

comparing the size of the metering file to a size threshold;

comparing the time of creation of one or more metering records in the metering file to a time threshold; and

transmitting the metering file to the server if the size of the metering file is larger than the size threshold or if the time of creation of one or more metering records in the metering file is older than the time threshold.

17. The method of claim 1, further comprising providing a financial data warehouse for determining the licensing fee for the technology platform based on the usage data.

18. The method of claim 1, wherein billing the content provider for the licensing fee comprises sending a financial invoice to the content provider, charging a credit card number provided by the content provider with an amount corresponding to the licensing fees, or charging the content provider through an on-line payment service.

19. The method of claim 1, further comprising allowing the content provider to verify the status of the license and the licensing fee.

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21. The method of claim 19, wherein allowing the content provider to verify the status of the license and the licensing fee comprises providing an account web site to allow the content provider to check a billing summary and a usage summary of the applet.

23. The method of claim 22, wherein the content user comprises a content user on an Intranet.

24. The method of claim 22, wherein the content user comprises a content user on the Internet.

25. The method of claim 22, wherein the technology platform comprises a content language for representing the applet in the content language and an execution engine for displaying and processing the applet.

26. The method of claim 22, wherein the technology platform further comprises a development environment for creating the applet.

27. The method of claim 22, wherein embedding licensing information into the applet comprises embedding a licensing tag into the applet, the licensing tag comprising a license number associated with the content provider and a license category.

28. The method of claim 27, wherein the license category comprises a non-commercial license to deploy non-commercial applets.

29. The method of claim 27, wherein the license category comprises a commercial retail license to deploy commercial applets based on the technology platform, the commercial retail license incurring a licensing fee determined by a standard fee schedule based on metered applet usage.

30. The method of claim 27, wherein the license category comprises a commercial negotiated license to deploy commercial applets based on the technology platform, wherein the terms of the license are negotiated

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31. The method of claim 22, wherein determining whether the licensing information indicates that the applet contains commercial content comprises verifying whether the license category of the applet is a commercial retail license or a commercial negotiated license.

32. The method of claim 22, wherein the usage data comprises one or more data items selected from a group consisting of: the size of the applet; the time and day of execution of the applet; the version of the execution engine used to process the applet; the amount of time during which the applet was executed; and the degree of interactivity of the applet.

33. The method of claim 32, wherein the usage data is stored into a metering record.

34. The method of claim 32, wherein the metering record comprises one or more data fields selected from a group consisting of: a license number data field associated with the content provider; a size data field containing the size of the applet; a data field containing the time and day of execution of the applet; a license category data field indicating whether the applet contains commercial content; a record checksum data field to verify the contents of the metering record; a version data field

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Figure 6. The effect of the initial concentration of the monomer (C_0) on the polymerization rate at different temperatures. The reaction conditions were as follows: $[AIBN] = 0.001 \text{ mol/L}$, $[K_2S_2O_8] = 0.001 \text{ mol/L}$, $[NaHCO_3] = 0.001 \text{ mol/L}$, $[NaHSO_3] = 0.001 \text{ mol/L}$, $[Na_2SO_3] = 0.001 \text{ mol/L}$, $[Na_2S_2O_4] = 0.001 \text{ mol/L}$, $[Na_2S_2O_5] = 0.001 \text{ mol/L}$, $[Na_2S_2O_8] = 0.001 \text{ mol/L}$, $[Na_2S_2O_7] = 0.001 \text{ mol/L}$, $[Na_2S_2O_3] = 0.001 \text{ mol/L}$, $[Na_2S_2O_4] = 0.001 \text{ mol/L}$, $[Na_2S_2O_5] = 0.001 \text{ mol/L}$, $[Na_2S_2O_6] = 0.001 \text{ mol/L}$, $[Na_2S_2O_7] = 0.001 \text{ mol/L}$, $[Na_2S_2O_8] = 0.001 \text{ mol/L}$, $[Na_2S_2O_9] = 0.001 \text{ mol/L}$.

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39. The method of claim 22, further comprising providing a financial data warehouse for determining the licensing fee for the technology platform based on the usage data.

40. The method of claim 22, wherein charging the content provider a licensing fee based on the usage data comprises sending a financial invoice to the content provider, charging a credit card number provided by the content provider with an amount corresponding to the licensing fee, or charging the content provider through an on-line payment service.

41. The method of claim 22, further comprising allowing the content provider to verify the status of the license and the licensing fee.

42. The method of claim 41, wherein allowing the content provider to verify the status of the license and the licensing fee comprises providing customer service.

43. The method of claim 41, wherein allowing the content provider to verify the status of the license and the licensing fee comprises providing an account web site to allow the content provider to check a billing summary and a usage summary of the applet.

44. A system for licensing a technology platform developed by a content technology provider to a content provider for deploying an applet to a content

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a metering server to process the usage data; and
an account invoicing system to charge the
content provider a licensing fee for deploying the applet
with the technology platform.

47. The system of claim 44, wherein the technology platform comprises a content language for representing the applet in the content language and an execution engine for displaying and processing the applet.

49. The system of claim 44, wherein the execution engine to display and process the applet comprises an execution engine selected from a group

54. The system of claim 44, further comprising a license assignment server to assign the license number to the content provider.

55. The system of claim 44, further comprising a verification server for verifying the status of the license number.

56. The system of claim 44, further comprising a financial data warehouse for determining the licensing fee for the technology platform based on the usage data.

57. The system of claim 44, wherein the account invoicing system comprises software routines for sending a financial invoice to the content provider, charging a credit card number provided by the content provider with an amount corresponding to the licensing fee, or charging the content provider through an on-line payment service.

58. The system of claim 44, further comprising a billing authorization service for checking the validity of financial information submitted by a commercial content provider when requesting a license to use the technology platform.

59. The system of claim 44, further comprising allowing the content provider to verify the status of the license and the licensing fee.

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60. The system of claim 59, wherein allowing the content provider to verify the status of the license and the licensing fee comprises providing customer service.

61. The system of claim 59, wherein allowing the content provider to verify the status of the license and the licensing fee comprises providing an account web site to allow the content provider to check a billing summary and a usage summary of the applet.

62. A software system on a content user's computer for metering the usage of an applet deployed by a content provider based on a technology platform licensed to the content provider by a content technology provider, the software system comprising:

an execution engine to display and process the applet;

a metering module in the execution engine to generate usage data when the applet is executed by the content user;

a routine that transmits the usage data to a metering server to process the usage data for the purpose of determining a licensing fee charged to the content provider for deploying the applet with the technology platform.

63. The software system of claim 62, wherein the content user comprises a content user on an Intranet.

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64. The software system of claim 62, wherein the content user comprises a content user on the Internet.

65. The software system of claim 62, wherein the technology platform comprises a content language for representing the applet in the content language and an execution engine for displaying and processing the applet.

66. The software system of claim 62, wherein the technology platform further comprises a development environment for creating the applet.

67. The software system of claim 62, wherein the applet contains a licensing tag comprising a license number associated with the content provider and a license category.

68. The software system of claim 67, wherein the license category comprises a category chosen from a group consisting of: a non-commercial license; a commercial retail license; and a commercial negotiated license.

69. The software system of claim 62, wherein the usage data comprises one or more data selected from a group consisting of: the size of the applet; the time and day of execution of the applet; the version of the execution engine used to process the applet; the amount of time during which the applet was executed; and the degree of interactivity of the applet.

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70. The software system of claim 62, wherein the usage data is stored into a metering record.

71. The software system of claim 70, wherein the metering record comprises one or more data fields selected from a group consisting of: a license number data field associated with the content provider; a size data field containing the size of the applet; a data field containing the time and day of execution of the applet; a license category data field indicating whether the applet contains commercial content; a record checksum data field to verify the contents of the metering record; a version data field indicating the version of the execution engine used to process the applet; and an applet statistics data field.

72. The software system of claim 62, wherein the routine that transmits the usage data to a metering server comprises a routine for storing a plurality of metering records into a metering file and transmitting the metering file to the metering server.

73. The software system of claim 71, wherein transmitting the metering file to the metering server comprises:

determining the time of creation of one or more metering records in the metering file;

comparing the size of the metering file to a size threshold;

comparing the time of creation of one or more metering records in the metering file to a time threshold;

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74. A system for licensing a technology platform developed by a content technology provider to a content provider for deploying an applet to a content user, wherein financial compensation to the content technology provider is based on usage of the applet by the content user, the system comprising:

metering means in the execution engine means for generating usage data when the applet is executed by the content user;

account invoicing means for charging the content provider a licensing fee for deploying the applet with the technology platform.

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        embedding licensing information into the applet;
        generating usage data when the applet is
executed by the content user;

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transmitting the usage data to a server;

Parameter	Value	Unit
Temperature	25.0	°C
Pressure	1.0	atm
Flow rate	1.0	L/min
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa
Concentration	0.1	mol/L
pH	7.0	
Wavelength	254	nm
Path length	1.0	cm
Sample volume	10	μL
Injection volume	1	μL
Column	C18	
Mobile phase	Water/Acetonitrile	
Gradient	0-100	%
Time	0-30	min
Flow rate	1.0	mL/min
Temperature	40	°C
Pressure	10	MPa